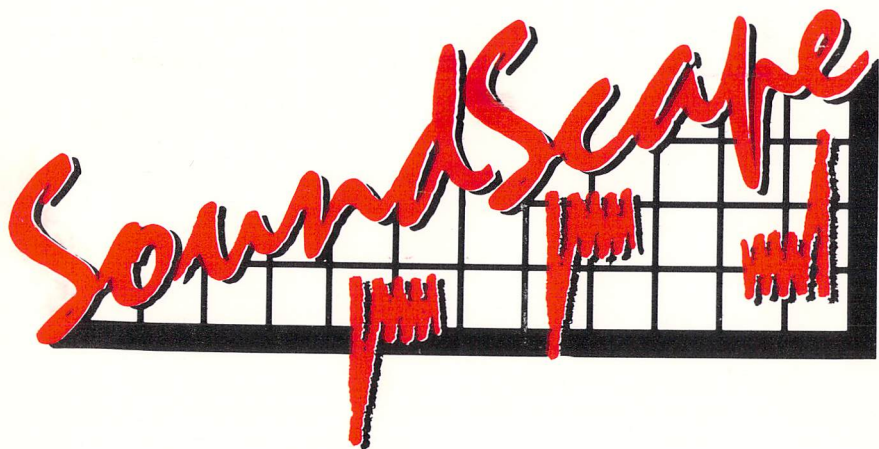


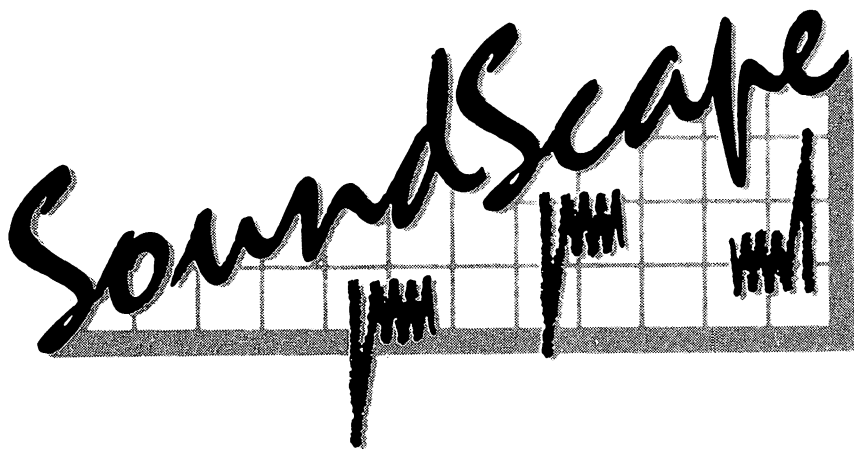


Sound Sampler

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Introduction

This manual is a reference manual written to acquaint you with the SoundScape Sampler and the Sampler software. It's not a tutorial; it doesn't explain details at great lengths, but it does contain the information you need to hook up your SoundScape Sampler and run the Sampler software. If you're not familiar with the workings of the Amiga computer, you should read Introduction to the Amiga, a manual included with the Amiga computer that shows you how to use the mouse, the Workbench, and other Amiga hardware and software. If you use the CLI (Command Line Interpreter) to handle SoundScape Sampler disk files, then you should also read the AmigaDOS User's Manual, available through Commodore or your Amiga dealer.

Throughout this manual the colors of the software and the Workbench are described the way they appear using standard Workbench colors: blue, white, black, and orange. If you have changed the Workbench colors with the Preferences program, your colors won't match the colors described in this manual. If it gets confusing, simply change the Workbench colors back to the original colors.

Overview

The SoundScape Sampler is an analog to digital converter that attaches to your Amiga computer through a controller port. When you use it with the Sampler software, it turns your Amiga into a full-featured sound sampler and

synthesizer. By digitally recording sounds through the Sampler, you can create your own library of sampled sound instruments that you can play on the Amiga using the Amiga's own keyboard. If you connect the Amiga to a MIDI network using a MIDI adaptor, it becomes a MIDI instrument that you can play using the keyboard of an external synthesizer or using the score in an external sequencer.

The SoundScape Sampler software saves the sampled sounds you create to disk so you can use them later. You can save the sounds using the Mimetics standard, a full-featured standard compatible with the other products in the Mimetics family of Amiga software, or you can save them using the IFF standard. Sounds you save with the IFF standard will work as instruments and sounds with other programs like Electronic Arts' Deluxe Music, Instant Music, and Deluxe Video.

[illegible]

SoundScape Sampler Setup

Before you start to use the SoundScape Sampler, take a minute to fill in the registration form at the end of this manual and send it to us at Mimetics. Once we have your name and address, we can inform you of changes in the SoundScape hardware, software, and manual.

You should also take some time to duplicate the SoundScape software disk (be sure to write-protect the original first), and put the original away for safekeeping. You might also find it handy to initialize a blank disk or two to use for saving sampled sound instruments later.

Setting Up the Hardware

Connecting the SoundScape Sampler

To connect your SoundScape Sampler to the Amiga, follow these steps:

1. Make sure the Amiga is turned off.
2. Plug the Sampler into controller port number two on the right side of the Amiga console.

Connecting a Microphone

To connect a microphone to the Sampler:

1. Plug the end of the microphone cable into the middle of the three audio ports on the Sampler box. You'll need a microphone cable that ends in an 1/8" mini phone plug.

Connecting a Line Level Audio Source

If you want to feed in an audio signal from a line level source such as a tape recorder, a compact disk player, or the Tape Out jacks of an amplifier, follow these steps:

1. Plug the pair of phone plugs at one end of a stereo patch cord into the output jacks of your audio source. The jacks should be labelled "Line Out", "Record Out", or something similar.
2. Plug the pair of phone plugs at the other end of the stereo patch cord into the two line level input jacks on the SoundScape Sampler. These two jacks are on each side of the microphone jack.

If you're feeding a stereo signal into the SoundScape Sampler, the Sampler mixes the two signals coming into its line level input jacks into a monaural signal, so you don't need to worry about which channel is the left channel and which channel is the right channel. If you're feeding a monaural line level signal into the SoundScape Sampler, use a single patch cord to connect it to the right line level input jack on the Sampler.

Running the Software

To run the Sampler software, follow these steps:

1. Turn on the Amiga, the monitor, and the monitor speaker (if it's separate from the monitor).

2. Load the Kickstart and then the Workbench disk to enter the Amiga Workbench.

3. Double-click the Sampler disk icon to open it up.

4. Double-click the Sampler program icon in the Sampler disk window to run the Sampler controller.

Two windows open on the Workbench: the Sampler window with all the Sampler controls, and the Console Keyboard window displaying a music keyboard.

Working the Sampler Controls

Notice the controls in the Sampler Control Panel. There are two different kinds:

- **Sliders.** These controls are long horizontal or vertical rectangles with a small white box inside. You can set a slider by dragging the small white box up and down or back and forth with the pointer. You can also set some of the sliders in increments by clicking the mouse select button with the pointer pointing in the slider ahead of or behind the slider box.
- **Buttons.** These controls are words that stand alone: Load, Save, Sample, Loop, and High. To use a button, just select the word with the pointer.

Making a Sampled Sound Instrument

The SoundScape Sampler samples the audio signal coming in through its audio ports using 8-bit samples at a rate of approximately 15,000 samples per second. Each sample is a value from -128 to +127, and corresponds to the voltage coming in through the audio port: very weak audio signals create samples hovering around zero, strong audio signals create samples that range all the way from -128 to +127.

The Sampler software makes a sampled sound instrument by saving these samples in waveform tables. Each sampled sound instrument contains 10 different waveform tables numbered 0 through 9 that correspond to musical octaves: waveform table 0 is the lowest octave, waveform table 9 is the highest octave. Each waveform table can store anywhere from 0 samples to 32,766 samples, which gives each table a maximum capacity of approximately two seconds of sampled sound.

When you play the sampled sound instrument using a keyboard, the Sampler software checks the octave and pitch of the key being pressed. It plays samples in the waveform table that corresponds to the octave of the note, and speeds up or slows down the playback of the waveform table to make it play back at the appropriate pitch within that octave.

If you save an entirely different sound in each octave's waveform table, you hear a different sound in each octave that you play on the keyboard using the sampled sound instrument. If you want to have the same sound stretched over many octaves, the Sampler software will translate the waveform table in one octave to higher and lower octaves and then store the translation in the appropriate octave's waveform table.

Sampling a Sound

To sample a sound, you first select the Sample button in the Sampler window. A new window opens up titled "Sample". In the window there are two sliders titled "Threshold" and "Length" and two buttons just below them. One of the buttons is shaped like a microphone and is called the Microphone button. The other is shaped like two boxes with an arrow between them and is called the Translate button. Below the two buttons is a row of octave boxes numbered from 0 to 9.

To capture a sound, follow these steps:

1. Select the octave you want to record in by selecting the appropriate octave box. If you pick a new octave box, it turns white the first time you select it, and orange the second time. These colors are for waveform translation, and don't affect the process actual sample capture process. The Sampler software always records the samples in the octave waveform table you last selected.
2. Slide the Length slider to set the size of the waveform table you want to use for that octave. You can read the size in a number to the right of the slider that tells you how many bytes are in the waveform table. Since each byte contains one sample, you can estimate the length of the sound you can sample: the maximum waveform table size of 32,766 bytes stores about two seconds of sampled sound, a half setting of 16,000 bytes stores about one second of sound.

3. Set the threshold slider to set the minimum value of a sample that the sampler must first detect before it will begin storing samples in the waveform table. This value is a value from 0 to 100. Setting a low value makes the Sampler software start storing samples in a waveform table almost as soon as you select the Microphone button. Setting a high value makes the Sampler software wait after you select the Microphone button until it detects a strong audio signal to start storing samples in the waveform table.

4. Select the Microphone button to start recording. The Sampler software starts to monitor the samples coming in from the Sampler. It doesn't store any samples until it detects a sample that is higher in value than the threshold value. When it does detect a high enough sample value, the screen goes blank while the Sampler software starts to store all the samples that follow in the waveform table. When the waveform table is full, it stops recording samples, and the Workbench screen returns.

Testing a Sound

To hear the sound you just sampled, play a C on the console keyboard in the octave you sampled. For example, play the I key to hear a sound sampled in the 5th octave. Play the Q key to hear a sound sampled in the 4th octave. (Make sure the Tune, Transpose, and Octave sliders are at their default settings for this to work. Read the next section to learn how to set these sliders to play any octave using the console keyboard.) If you don't like what you hear, you can select the Microphone button again to re-record a sound in the save waveform table. This erases the old waveform table.

Filling the Other Octaves

To fill each of the octave waveform tables with a different sound, repeat the sound capturing procedure for each octave. You can set the Threshold and Length sliders to different values for each of these waveform tables.

Translating One Octave to Another Octave

The sound in any one octave waveform table can play a one octave range, from A natural to G sharp. The Sampler software can make the same sound cover a range of up to 10 octaves by translating and copying one waveform table to fit in the other octaves. To translate one octave waveform table to another octave:

1. Select the box of the original octave waveform table.
2. Select the box of the octave you want to copy the original octave to. The original octave box is colored orange, the "copy to" box is colored white.
3. Select the Copy button. After some short calculation, the Sampler software copies the contents of the original waveform table into the new waveform table, adjusting it to the appropriate octave.

If you copy one octave to the next higher octave, the new octave waveform table will be half as long as the original waveform table. If you copy an octave to the next lower octave, the new octave waveform table will be twice as long as the original waveform table, up to a limit of 65,534 bytes. If you copy one octave down to successively lower octaves, you can easily use up a lot of RAM. While it's possible to use large sampled sound instruments with a lot of low octaves if you have external RAM on your Amiga, if you want to create instruments that will work in other Amigas without external RAM, you should keep the total content of the 10 waveform tables down below 200K of RAM.

Quitting the Sample Window

When you're finished creating a sampled sound instrument, you must quit the Sample window to work with the controls in other windows that allow you to edit the waveform tables and control the instrument playback. To quit the

Sample window, just select the close gadget in the upper left corner of the window.

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Playing a Sampled Sound Instrument

You can play a sampled sound instrument in the Amiga's memory using the Amiga's console keyboard or using an attached MIDI keyboard or sequencer. The Sampler software receives notes from any of these sources in the MIDI data format, and uses the pitch and octave of the notes to select the appropriate octave waveform table and playback speed for each note. It then plays the notes through the attached monitor speaker.

You can alter the way the Sampler software interprets the MIDI data it gets using the sliders on the left side of the Sampler window. These sliders are described in the section "Setting Performance Controls" later in this manual.

Playing the Console Keyboard

You can play the Amiga's console keyboard like a piano keyboard: the top row of letters (QWERTYUIOP[]) plays a C major scale, with middle C (in the 5th octave) located on the I key; the number row of keys (1234567890-=/) above the QWERTY row plays the equivalent of the black notes on a piano. The

Console Keyboard window shows how the piano keyboard relates to the console keyboard.

You can play as many notes as you wish simultaneously on the console keyboard. Since the Amiga plays only four simultaneous notes, the Sampler software chooses four notes from the notes you press on the keyboard if you play more than four notes at one time.

You can play the console keyboard while you have either the Sampler window, the Sample window, or the Console Keyboard window selected. If you select any other windows or the Workbench background, the console keyboard won't play. If you select the Console Keyboard window and bring it to the front of the other windows, you can see keys on the music keyboard in the window flash the pitches that you play on the console keyboard.

Shifting the Console Keyboard Up an Octave

If you select the Console Keyboard window and press the CAPS LOCK key so the red light in the key glows, the console keyboard shifts up an octave in pitch so you can play pitches an octave higher than you could earlier. Middle C is now located on the Q key, and all the MIDI pitches the console keyboard sends out are an octave higher than they were before. If you press the CAPS LOCK key so the key light turns off while you have the Console Keyboard window selected, the console keyboard again plays in its original range. Pressing the CAPS LOCK key when you don't have the Console Keyboard selected has no effect on the way the console keyboard plays.

The Amiga as a MIDI Instrument

You can control the Amiga as a MIDI instrument by attaching an external MIDI instrument to the Amiga. The external MIDI instrument--which must have a MIDI Out port to work with the Amiga--can be a synthesizer, a drum box, a sequencer, or any other instrument that sends out notes and other musical information using the MIDI standard.

Connecting an External MIDI Instrument to the Amiga

To connect a MIDI instrument to the Amiga, you need a MIDI adaptor for the Amiga and a MIDI cable to connect the adaptor to the external MIDI instrument. The MIDI adaptor plugs into the Amiga's serial port and has a MIDI IN jack to receive MIDI signals. The adaptor translates the MIDI signals it receives into signals that can pass through the Amiga's serial port. The Sampler software can then read the MIDI data to see what music information is coming from the external MIDI instrument.

To connect a MIDI instrument, follow these steps:

1. Plug the MIDI adaptor into the Amiga's serial port.
2. Plug one end of the MIDI cable into the MIDI In jack on the MIDI adaptor.
3. Plug the other end of the MIDI cable into the MIDI Out jack on the external MIDI instrument.

Selecting the Appropriate MIDI Channel

MIDI instruments can send music data over any of 16 different MIDI channels that are carried through the MIDI cable. The Sampler software receives incoming MIDI data on MIDI channel 1. Most MIDI instruments use channel 1 to transmit MIDI data. Consult the user's manual of the external MIDI instrument you want to use with the SoundScape Sampler to see if it transmits automatically on MIDI channel 1. If it doesn't, set it so it will send MIDI data out through channel 1.

Playing a Sampled Sound Instrument

The Sampler software uses the pitches and note durations it receives over MIDI channel 1 to play notes using the sampled sound instrument it has in memory, just as it uses pitches and durations from the console keyboard. The Sampler software also recognizes and plays pitch bend and key velocity information that it receives as MIDI data from an external MIDI instrument that has a pitch wheel or a touch-sensitive keyboard that creates this kind of data.

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Editing a Sampled Sound Instrument

On the right side of the Sampler window are controls that let you edit the sound of any sampled sound instrument you created in the Sample window or loaded from disk. The upper set of controls lets you control the looping of the waveform table and also lets you set the beginning and ending points where the waveform table begins and stops playing. The lower set of controls lets you create an amplitude envelope for the sampled sound instrument that can change the shape of the notes it plays.

Setting Start, Loop Start, and Loop End Points

Whenever the Sampler software plays a note using a sampled sound instrument, it reads through a waveform table from the beginning of the table to the end of the table. If the note ends before the Sampler software is finished reading through the waveform table, the Sampler software stops playing without finishing the waveform table. If the note lasts longer than the length of the waveform table, the Sampler software can either stop playing at the end of the waveform table before the note is finished, or it can loop back to a point in the waveform table and play the table over and over again from that point until

the note is finished. You can choose either option by setting the Loop or the No Loop option.

In the upper left section of the Sampler window is a set of five buttons. One of these buttons reads either "Loop" or "No Loop". This is the Loop button. If you select it, it switches back and forth between Loop, where the Sampler software loops through the waveform table as you play notes, and No Loop, where the Sampler plays through a waveform table only once.

Setting the Start Slider

The length of the Start slider from left to right represents the length of a waveform table in the sampled sound instrument (as do the lengths of the Loop Start and Loop End sliders). You can use the slider to set the point in the waveform table where you want the Sampler software to start playing at the beginning of a note. If you set the Start slider all the way to the left, each note begins playing at the beginning of the waveform table. If you set the Start slider all the way to the right, the note begins at the end of the waveform table, and so won't play at all. Setting it anywhere in between starts the waveform table playing somewhere in between the beginning and end of the table.

Setting the Loop Start Slider

If you have the Loop button set to Loop and play a long note, the Sampler software starts playing the waveform table at the point set in the Start slider, plays all the way to the point set in the Loop End slider, and then jumps back to the point set in the Loop Start slider and starts playing the waveform table again. It continues looping until the note ends. By setting the Loop Start slider all the way to the left, the loop begins at the beginning of the waveform table, by setting the Loop Start slider towards the left, the loop starts from somewhere within the waveform table.

If you have the No Loop option selected, the Sampler software ignores the Loop Start slider setting when it plays a note.

Setting the Loop End Slider

You can set the loop end point of the waveform table with the Loop End slider. If you have the Loop option selected, when you play a note the loop ends at the point you set and starts again at the point set in the Loop Start slider. You can't set the Loop End slider to a point earlier in the waveform table than the Loop Start slider.

If you select the No Loop option, the Sampler software uses the Loop End slider setting as a setting for the end of the waveform table. When you play a note, it plays the waveform table from the point set in the Start slider to the point set in the Loop End slider and then stops playing.

The values you set in the Start, Loop Start, and Loop End sliders set the same relative point in all ten of the sampled sound instruments waveform tables. If you have copied one sound to all ten of the octaves, then the start, loop, and end points all sound in the same place. If you have completely separate sounds in the octaves, then a set of start, loop, and end points that works well with one sound may not work well with another sound.

Setting the Amplitude Envelope

The Sampler software uses the amplitude envelope you see displayed in the envelope display on the left side of the Sampler window to shape each note it plays. The shape you see in the display is a graph of amplitude (loudness) over time; the bottom of the graph represents silence, the top represents maximum amplitude. Each time the Sampler software plays a note, it quickly follows the contour of the envelope from left to right, changing the volume to shape the note.

There are three different levels in the envelope: Level 1, Level 2, and Level 3 (labelled L1, L2, and L3 on the sliders). There are also four different rates: Rate 1, Rate 2, Rate 3, and Rate 4 (labelled R1, R2, R3, and R4). When the Sampler software plays a note, it starts at zero volume, and increases in

volume to Level 1 using the speed set in Rate 1. It then changes to the volume set in Level 2 using Rate 2, and changes to Level 3 using Rate 3. The note remains at the volume set in Level 3 (sometimes called the sustain level) until the end of the note. At the note's end, the volume decreases to silence using the speed set in Rate 4.

Setting the Envelope Sliders

You can set the envelope's levels and rates using the seven sliders below the envelope display. Sliding a Level slider up increases the amplitude of the level, sliding it down decreases the amplitude. Sliding a Rate slider up quickens the rate, sliding a Rate slider down slows the rate.

The envelope display changes to match the settings of the sliders. Since the display shows the entire envelope from beginning to end, the length of the envelope sections stretching from one level to another are entirely relative; if you set a very slow Rate 4, for example, most of the display shows the tail of the envelope descending from left to right. The rest of the envelope is condensed into the left side of display, since the rest of the envelope is very short relative to the descent in Rate 4.

A few things to note about the envelope:

If you want to hear the sampled sound instrument as you recorded it without an added envelope, set all seven of the sliders to the top. This starts the envelope immediately at top amplitude and keeps it there until the end of the note when it immediately drops to silence again.

To hear the effect of new envelope settings, just play a note on the console keyboard.

Slowing down Rate 1 softens the attack of each note and "oozes" them out.

Slowing down Rate 4 makes each note die out more slowly, adding a "ringing" effect.

Like the Start, Loop Start, and Loop End slider settings, any envelope you set applies to all the octaves in the sampled sound instrument equally. Also, the duration of the amplitude changes imposed on the sampled sound by the envelope controls remains constant: it doesn't speed up or slow down as the waveform tables are played back at faster and slower speeds to change pitch.

[illegible]

Setting Performance Controls

The Sampler software receives notes as MIDI data from the console keyboard and from attached MIDI instruments, and plays pitches and note lengths according to the data it receives. You can change the way the Sampler software responds to the MIDI data by setting the performance controls on the left side of the Sampler window. These controls let you fine tune the pitch of a sampled sound instrument, transpose it to different keys or octaves, or change its sensitivity to pitch wheels and velocity sensitive keyboards on attached MIDI synthesizers.

Setting the Low/High Button

In the upper left section of the Sampler window is a button labelled either "Low" or "High". If you select this button, it changes from one setting to the other. If you choose the High setting, the Sampler software plays back all the waveform tables at their normal pitches. If you choose the Low setting, the Sampler software plays back the tables at one half their normal speed, making every note sound an octave lower.

Setting the Tune Slider

Dragging the Tune slider left or right changes the intonation of the sampled sound instrument up or down in increments of one cent (1/100th of a half-step), shown by the number to the right of the slider. Dragging right can tune the instrument up to 100 cents above its normal intonation. Dragging left can tune the instrument down to 100 cents below its normal intonation. Setting the slider exactly in the center uses the original intonation of the sampled sound instrument.

Setting the Transpose Slider

The Transpose slider setting determines how the Sampler software transposes incoming MIDI notes. You can set it in increments of half-steps, from 0 half-steps to 11 half-steps, shown in the number to the right of the slider. Setting the Transpose slider all the way to the left at the 0 setting means no transposition at all: the pitches of the MIDI notes coming in are the pitches the Sampler software uses to play a sampled sound instrument. Dragging the Transpose slider to the right starts transposition. For example, if you set the Transpose slider to 4 half-steps, the Sampler software transposes the pitch of each incoming MIDI note up by 4 half-steps, then uses the transposed pitch to play the sampled sound instrument.

Setting the Octave Slider

The Octave slider works almost exactly like the Transpose slider, except that instead of transposing incoming MIDI notes up by half-steps, it transposes them up or down by whole octaves. The number to the right of the slider shows the number of octaves used in transposition. If you set the slider exactly in the middle, the MIDI notes won't be transposed at all. If you drag the slider to the left, it transposes down to a maximum of 4 octaves. If you drag the slider to the right, it transposes up to a maximum of 4 octaves.

The Octave slider is very convenient for reaching octaves in a sampled sound instrument that you normally couldn't play with a short keyboard. For example, the console keyboard has a range of two and a half octaves. You can use the Octave slider to let those two and a half octaves play any of the 10 octave waveform tables in the sampled sound instrument.

Setting the V Sensitivity Slider

Many MIDI synthesizers have velocity sensitive keyboards. If they're attached to the Amiga, they can send MIDI velocity data that tells how hard each key on the keyboard was pressed. The V Sensitivity slider controls how sensitive the Sampler software is to the velocity data.

If the V Sensitivity slider is set all the way to the left to a sensitivity of 0, the Sampler software ignores any velocity data and plays all its notes at the same overall volume. If the slider is set all the way to the right to a sensitivity of 99, the Sampler software uses the widest volume range it can to respond to the velocity data: small velocity values (a light keystroke) play notes at a very soft volume, large velocity values (a heavy keystroke) play notes at a very loud volume. V Sensitivity slider settings between 0 and 99 give you varying ranges of volume going from a small range in the left of the slider to a large range in the right of the slider. If you use a keyboard that isn't velocity sensitive, the V Sensitivity slider has no effect because there is no velocity data to respond to.

Setting the Pitch Bend slider

If you have a MIDI synthesizer with a pitch wheel attached to the Amiga, it can send MIDI pitch bend data to the Sampler software. The Pitch Bend slider sets the pitch range the Sampler software uses to bend the pitch of the sampled sound instrument when it receives pitch bend data.

You can set the Pitch Bend slider in increments of half-steps ranging from 0 half-steps at the far left of the slider to 12 half-steps (a full octave) at the far

right of the slider. If you set it to 0, the Sampler software ignores any MIDI pitch bend data coming in, and won't bend the pitch of the sampled sound software. If you set it to 1 to 12 half-steps, the Sampler software lets the pitch bend data bend the pitch of the sampled sound instrument up or down by the number of half-steps you set. For example, if you set the Pitch Bend slider to 6, the pitch wheel of the attached MIDI synthesizer can bend the pitch of a sampled sound instrument anywhere from the original pitch up to a pitch 6 half-steps higher or down to a pitch 6 half-steps lower than the original pitch.

One thing to note about the Pitch Bend slider: if you have the Low/High button set to High, it's possible to bend the pitch of a note higher than the waveform table can play the pitch. In that case, the note only goes up to the maximum possible pitch and then stops. For example, you might try to bend the pitch of a note up by 9 half-steps when the waveform table can only play it up 4 half-steps. In that case, the Sampler software bends the pitch up no further than 4 half-steps. If you have the Low/High button set to Low, the pitch bend works in both directions without running into limits set by the waveform table.

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Saving and Loading Sampled Sound Instruments

You can save sampled sound instruments on disk to be loaded again later or used in other music programs. The Sampler software gives you a choice of two different sampled sound file standards--the IFF and the Mimetics standard --and lets you store the instruments on any attached floppy disk drives or a hard disk drive.

Saving a Sampled Sound Instrument

To save a sampled sound instrument, follow these steps:

- 1. Select the Save button in the upper left section of the Sampler window. A small requester titled "Sample" appears. In the requester is a box following the label "Name" displaying the name "DF0:File".**
- 2. Select the box. A rectangular orange cursor appears within it.**

3. Use the cursor keys and the BACKSPACE and DELETE keys to change the name in the box to the name you want to save your instrument under. You can use any name up to 23 characters long, and you can specify the disk drive you want to save to by changing the name's prefix (discussed later). Press the RETURN key when you're finished to save the instrument. (Choose the Quit button in the requester if you want to leave the requester without saving the instrument.) The Sample requester disappears and a new requester titled "File Format?" appears.

4. Select the IFF button to save the instrument as an IFF file or select the Mimetics button to save the instrument as a Mimetics file. The requester disappears, and the Sampler software saves the instrument under the name you entered earlier, appending ".sample" to the name to identify the file as a sampled sound instrument.

Saving to Different Disks

When you enter a file name for your sampled sound instrument, the Sampler software saves it on the Sampler software disk unless you add a prefix to the filename. Use the prefixes listed here to save to a disk in a different drive:

- DF0: the internal disk drive
- DF1: the first external disk drive
- DF2: the second external disk drive
- DF3: the third external disk drive
- DH0: a hard disk drive

For example, if you want to save an instrument called "Harp" to a disk in the external disk drive, you would use the filename "DF1:Harp".

The Mimetics File Format

When you save a sampled sound instrument using the Mimetics format, you save all ten of the octave waveform tables and the settings of all the loop, envelope, and performance control sliders in the Sampler window. You can use the Mimetics format sampled sound instrument in any other Mimetics music software for the Amiga such as SoundScape.

The IFF Standard

If you save a sampled sound instrument using the IFF standard, you save the contents of the octave waveform tables and the setting of the Loop Start slider. You don't save the settings of any of the other sliders, so there is no envelope or performance settings in an IFF file.

The IFF standard sets a predetermined length for each of the octave waveform tables: it saves the contents of the highest octave, stretching from the point in the waveform table at the setting of the Start slider to the point in the table at the setting of the Loop End slider. It saves the same section of each of the octave waveform tables below, doubling the size of the table for each octave it goes down. For example, if it saved 512 bytes in octave 7, it would save 1024 bytes in octave 6, 2048 bytes in octave 5, 4096 bytes in octave 4, and so on down to 65536 bytes in octave 0.

Doubling the size of stored octaves as you go down the octaves works fine if you have an instrument that contains one sampled sound that has been translated to all the other octaves: each octave waveform table will be twice the length of the octave waveform table above it. If you use different sampled sounds in different octave waveform tables though, saving the instrument with the IFF format can chop up those different sounds. It's best to avoid using multiple sound instruments with the IFF standard.

Once you save a sampled sound instrument using the IFF standard, you can use it in other Mimetics music software for the Amiga, and you can also use it

in Amiga music software produced by other software publishers as long as they support the IFF standard for sampled sound instruments. Some programs that do use the IFF standard are Deluxe Video, Instant Music, and Deluxe Music, all from Electronic Arts.

Loading a Sampled Sound Instrument

To load a sampled sound instrument, follow these steps:

1. Choose the Load button in the Sampler window. A requester labelled "Sample" appears with a device name at the top of the requester followed by a list of sampled sound instruments in the drive that is specified by the device name.
2. To see the instruments stored on another disk drive, select the device name and change it with the editing keys to the device name you want, using the device names listed earlier in this chapter. Press RETURN when you're finished, and the list of instruments will change to show you the instruments on the drive you requested.
3. To look at instrument names on a different disk using the same disk drive, first eject the disk in the disk drive, then insert the second disk. Select the device name and press RETURN without changing the device name. The list of instruments will change to show you the instruments on the new disk.
4. To see all the instruments in a long instrument list, drag the scroll bar on the right of the list up and down to scroll through the instrument names.
5. To load an instrument, select the instrument's name, then select the Read button; or to use a short-cut, double-click on the instrument's name. The instrument loads into the Amiga's RAM, erasing any instrument that might already be in RAM. The requester disappears.

Saving and Loading Sampled Sound Instruments

When you load a sampled sound instrument, the Sampler software automatically senses whether it's a Mimetics or an IFF file, and loads it accordingly. If it's a Mimetics file, all 10 octave waveform tables are retrieved, and the Sampler controls are all reset to the settings they were saved at when the instrument was saved. If it's an IFF file, the octave waveform tables are retrieved as they were saved and the Loop Start slider is set as it was saved.

[illegible]

Mimetics SoundScape Sampler

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For further information contact:

**MIMETICS CORPORATION
P.O. BOX 60238 STA. A
PALO ALTO, CA 94306**



